

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P300476

Luminaire Tested: **ML4D09\_27D2WE - TIR45SP15 - TL43R2G0RBBB - TL44S2G0RBBB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P300476  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-56)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML4D09\_27D2WE - TIR45SP15 - TL43R2G0RBBB - TL44S2G0RBBB  
Description: ML4 2700K, 900LM DIM-TO-WARM, 15DEG SP OPTIC, WITH ROUND/SQUARE DIFFUSED CLEAR LENS, OIL RUBBED BRONZE FLANGE, BLACK LENS FRAME  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 455.0 lumens  
Efficiency: N/A  
Efficacy: 40.6 lumens/watt  
Spacing Criteria (0/90/45): 0.36 / 0.36 / 0.37  
Luminous Opening: Circular (Dia: 0.19' x H: 0')  
CIE Type: Direct

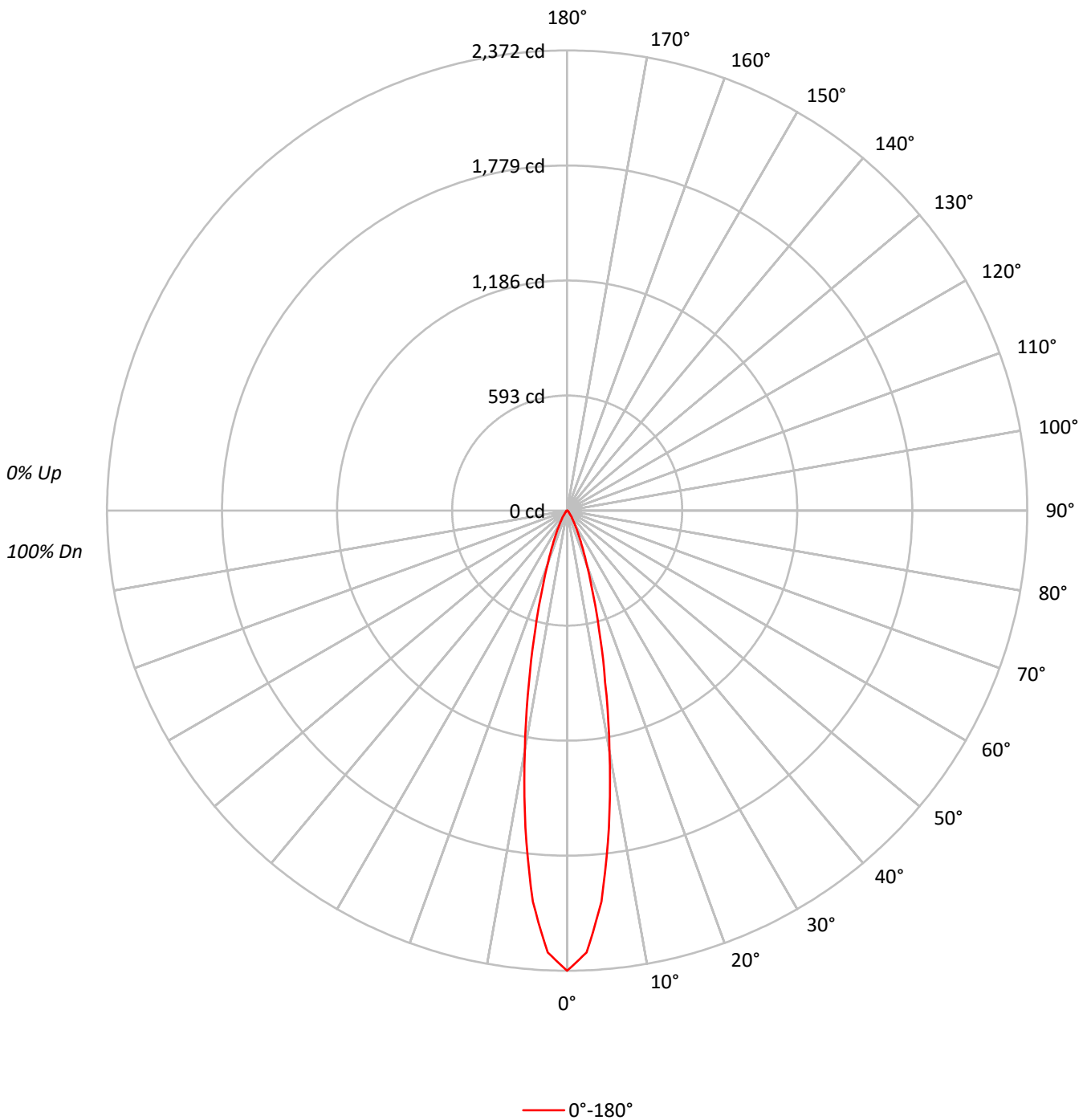
Input Watts (W): 11.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	100	102	100	98	100	98	96	97	95	94	93
3	107	102	99	96	105	101	98	95	99	96	94	96	94	92	94	92	91	89
4	104	98	94	91	102	97	93	91	95	92	90	93	91	89	92	89	88	86
5	101	95	90	87	99	94	90	87	92	89	86	91	88	85	89	87	85	84
6	98	91	87	84	96	90	86	84	89	86	83	88	85	83	87	84	82	81
7	95	88	84	81	94	88	84	81	86	83	80	85	82	80	84	82	80	78
8	92	85	81	78	91	85	81	78	84	80	78	83	80	78	82	79	77	76
9	90	83	79	76	89	82	78	76	82	78	76	81	78	75	80	77	75	74
10	87	81	76	74	87	80	76	74	79	76	73	79	76	73	78	75	73	72

**AVERAGE LUMINANCE (cd/sqm):**

	0°
0°	924643
5°	791878
10°	496787
15°	254460
20°	121219
25°	59831
30°	31105
35°	16656
40°	9669
45°	6064
50°	3639
55°	2719
60°	2339
65°	1845
70°	1140
75°	1506
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.8	36.9
10°-20°	180.3	39.6
20°-30°	68.6	15.1
30°-40°	23.6	5.2
40°-50°	8.7	1.9
50°-60°	3.7	0.8
60°-70°	1.7	0.4
70°-80°	0.7	0.1
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	416.7	91.6
0°-40°	440.3	96.8
0°-60°	452.6	99.5
0°-90°	455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	455.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2372	
5°	2024	168
15°	630	180
25°	139	69
35°	35	24
45°	11	9
55°	4	4
65°	2	2
75°	1	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2371.9
2.5°	2279.8
5°	2023.6
7.5°	1648.3
10°	1255.0
12.5°	905.7
15°	630.5
17.5°	429.3
20°	292.2
22.5°	201.2
25°	139.1
27.5°	97.1
30°	69.1
32.5°	49.0
35°	35.0
37.5°	26.0
40°	19.0
42.5°	14.0
45°	11.0
47.5°	8.0
50°	6.0
52.5°	5.0
55°	4.0
57.5°	3.0
60°	3.0
62.5°	2.0
65°	2.0
67.5°	1.0
70°	1.0
72.5°	1.0
75°	1.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)